

ALD for Industry 2024

The 7th International Conference „ALD FOR INDUSTRY“ will again bridge the gap between fundamental science, industrialization and commercialization of this technology. Atomic layer deposition (ALD) is a process for depositing a variety of thin film materials from the vapor phase of matter. The growth of this technology is not only based in microelectronics applications, but also in areas of industrial Li-Ion batteries, photovoltaics, optics, light, biomedicine and quantum technology.

This event is already established since 2016 and attracts annually more than 100 participants and numerous exhibitors to visit Dresden. The Conference with Tutorial provides the opportunity to learn more about fundamentals of ALD technology, to get informed about recent progress in the field and to get in contact with industrial and academic partners. Increase your visibility and present your company in our accompanying exhibition.

PROGRAM COMMITTEE

- Jamie Greer, Air Liquide Advanced Materials, Paris, France
- Dr. Christoph Hossbach, Picosun Oy and Picosun Europe GmbH, Dresden, Germany
- Dr. Martin Knaut, IHM, TU Dresden, Germany
- Prof. Mikko Ritala, University of Helsinki, Helsinki, Finland
- Jonas Sundqvist, AlixLabs AB / TECHCET LLC CA, Lund, Sweden
- Dr. Claudia Wiemer, CNR IMM, Unit of Agrate Brianza, Italy
- Abhishekkumar Thakur, Bühler Alzenau GmbH, Germany

ORGANIZER

European Society of Thin Films
 Gostritzer Straße 63 | 01217 Dresden | Germany
 Tel: +49 351 8718370 | info@efds.org | www.efds.org

SUPPORTED BY



Program

Tuesday, March 12, 2024

08:00 | Registration & Exhibition
Construction

10:00 | Opening of the Tutorial

10:10 | Tut01

ALD fundamentals and process development

Martin Knaut, Technische Universität
Dresden, Germany

10:30 | Tut02

Analytical methods for ALD Technologies

Dane Walker, HIDEN Analytical Ltd, UK

10:50 | Questions

11:00 | Coffee Break & Opening of the Exhibition

11:30 | Tut03

Atomistic simulation for design of atomic level processing chemistries; towards sustainable thin film processing

Michael Nolan, Tyndall National
Institute, Cork, Ireland

11:50 | Tut04

Paradigm shift for vapor phase delivery of solid precursor

Hervé Dulphy, Air Liquide Electronics
Systems, France

12:10 | Tut05

Precursor development: A Chemist's perspective to develop new ALD processes

Anjana Devi, IFW, TU Dresden,
Germany

12:30 | Questions

13:00 | Lunch Break

14:00 | Start Workshops

14:00 | WS01

Green ALD? A guide to a better practice using an LCA approach

Houyem Hafdi, Linköping University,
Sweden

14:20 | WS02

High performance automation for spatial ALD and general substrate workflow

Aaron Strobel, LSA GmbH, Germany

14:40 | WS03

ALD: The Swiss Army Knife of Industrial Innovation

Ward Loeffen, Euris GmbH, Germany

15:00 | WS04

Integrated (PE)ALD solutions for interface engineering in power electronics

Christoph Hossbach, Applied Materials,
Germany

15:20 | Coffee Break & Exhibition

16:00 | WS05

ALE for GaN in power electronics

Jonas Sundqvist, AlixLabs AB, Sweden

16:20 | WS06

ALD processes at Infineon

Wolfgang Lehnert, Infineon
Technologies AG, Regensburg,
Germany

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16:40 | WS07

Modifying the properties and performance of biodegradable polymers with ALD

Gil Menasherov, FNAI-Technion, Israel

17:00 | WS08

Application of very thin coatings on different grades of particles by ALD

Mario Krug, Fraunhofer IKTS, Germany

17:20 | WS09

Epitaxial quality Ga₂O₃ and GaN thin films grown by hollow cathode plasma ALD

Ali Kemal Okyay, OkyayTech ALD, USA

End of first Day 17:40.



Many thanks to our Supporting Partners

19:00 **Get-Together @ Restaurant**

Sophienkeller | Taschenberg 3, 01067 Dresden | near to Semperoper, Zwinger and Dresden Castle



Wednesday, March 13, 2024

09:00 | Opening of DAY 2

09:10 | WS10

Scaling ALD for optical coatings using DC plasma and a novel method for precursor separation

Eric Dickey, Lotus Applied Technology, USA

09:30 | WS011

Application of plasma enhanced rotary atomic layer deposition for optical coatings

Gerd-Albert Hoffmann, Laser Zentrum Hannover e.V., Germany

09:50 | WS12

Modeling and simulation of ALD in a level set framework

Lado Filipovic, Technische Universität Wien, Austria

10:10 | WS13

Hybrid Monte Carlo and reactive molecular dynamics simulation of ALD

Xiao Hu, Center for Microtechnologies, Germany

10:30 | Coffee Break & Exhibition

11:00 | WS14

Mechanical model materials with ALD, MLD and PVD

Ivo Utke, EMPA, Switzerland

11:20 | WS15

Strong chemical reducing agents for metal ALD

Daniel Löffler, BASF SE, Germany

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11:40 | WS16

Presentation of Pegasus Chemicals

Paul Williams, Pegasus Chemicals,
United Kingdom

11:50 | WS17

Progress in products, services and strategic vision

Thilo Hepp, Dock Chemicals, Germany

12:00 | Lunch Break

13:00 | WS18

Modulus and yield strength measurements of ultra-thin ALD coatings in a thickness range between 5 nm and 100 nm

Thomas Chudoba, ASMEC GmbH,
Germany

13:20 | WS19

An infrared optical sensor for quantitative inline inspection of nano coatings on plastic products

Benedikt Hauer, Fraunhofer IPM,
Germany

13:40 | WS20

In-situ gas monitoring of ALD processes using remote optical emission spectroscopy

Erik Cox, Gencoa, United Kingdom

14:00 | WS21

Ultra-fast industry-compatible FEOL ALD film analysis

Thomas Werner, Chipmetrics Oy,
Germany

14:20 | Coffee Break & Exhibition

15:00 | WS22

Electrical results of integrated ALE and PEALD process first results of 300mm FALP tool with Plasway ESC

Stephan Wege, plasway-Technologies GmbH, Germany

15:20 | WS23

From Nano to Micro: When ALD meets with PVD to enhance coating performance

Carlos Guerra, Swiss Cluster,
Switzerland

15:40 | WS24

Fast remote plasma ALD and its applications

Harm Knoops, Oxford Instruments and Eindhoven University, Netherlands

16:00 | ALPIN – AN ALD Network

16:10 | PANEL DISCUSSION

Information funding & chips act

16:40 | final remarks

17:00 | End of the Workshop

Please, register online for the event:

[International Conference: ALD for Industry 2024 – EFDS](#)

Many thanks to the Program Committee and all authors for the preparation of the recent interesting program. We are looking forward to seeing all in Dresden.

Exhibition

The Exhibition at the event will be open in parallel to the Workshop and the Tutorial. You can find experienced and competent partners for ALD tools, components, equipment and precursors. During the breaks you can inform yourself about new products and services.

The several breaks will give you the opportunity to speak with participants, speakers and exhibitors while having a coffee and snacks.

You will find the following exhibitors:

ATLANT 3D

 Dock

 GENCOA

 APPLIED MATERIALS®

 Pegasus

 innodys

 EpiValence
Building Chemical Bonds

 euris

 HIDEN ANALYTICAL

 ICAM ENGINEERING LTD

 Veeco

 Kashiyama
Vacuum Solutions

 mks

 M·S·A
MASCHINEN SYSTEME ANLAGEN AG

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 SENTECH
Erfolg durch Leistung

 SPARKNANO

 STREICHER

 LSA
AUTOMATION

 ALPIN

 EPIC
EUROPEAN PHOTONICS
INDUSTRY CONSORTIUM

Travelling

Event Location

Penck Hotel Dresden
Ostra-Allee 33, 01067 Dresden
E-Mail: hello@penckhotel.de
Phone: +49 351 492 27 85
<https://www.penckhoteldresden.de/>

Hotel recommendations

- **Penck Hotel Dresden** * Event Location
Ostra-Allee 33, 01067 Dresden
<https://www.penckhoteldresden.de/>
Single-Room 99,00 EUR | Double-Room 119,00 EUR | KEYWORD: "ALD Workshop EFDS"
- **Holiday Inn Dresden – Am Zwinger** | Ostra-Allee 25, 01067 Dresden |
<https://www.ihg.com/holidayinn/hotels/>
Single-Room 111,00 EUR | Double-Room 130,00 EUR | KEYWORD: "ALD-EFDS"

Duration of the Event

March 12, 2024 | 08:00
March 13, 2024 | 17:00

